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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/333,809	08/26/99	CALDWELL	D 113518
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SAMUEL H DWORETSKY
AT & T CORPORATION
P O BOX 4110
MIDDLETOWN NJ 07748-4110

TM92/1003

EXAMINER

ROBINSON, G

ART UNIT	PAPER NUMBER
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2177

Handwritten number 4

DATE MAILED:

10/03/01

Please find below and/or attached an Office communication concerning this application or proceeding.


Commissioner of Patents and Trademarks

See attached Article.

Handwritten initials

Office Action Summary

Application No. 09/383,889	Applicant(s) Cadwell et al.
Examiner Greta Robinson	Art Unit 2177



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on Aug 26, 1999
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claims _____ are subject to restriction and/or election requirements.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) All b) Some* c) None of:
- Certified copies of the priority documents have been received.
 - Certified copies of the priority documents have been received in Application No. _____.
 - Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) Notice of References Cited (PTO-892) 18) Interview Summary (PTO-413) Paper No(s). _____
- 16) Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) Notice of Informal Patent Application (PTO-152)
- 17) Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) Other:

Art Unit: 2177

DETAILED ACTION

1. Claims 1-10 are pending in the present application.

Drawings

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1-5 and 7-10 rejected under 35 U.S.C. 102(e) as being anticipated by Breternitz Jr et al US Patent 6,216,213 B1.

Regarding claim 1, **Breternitz Jr. et al.** teaches a method for improving compression of a stream of data comprising:

Art Unit: 2177

transforming the data in accordance with a schema [col. 3 lines 24-29; also note abstract];
and
compressing the transformed data [note element *compressed (40)* figure 2; see col. 5 lines
21-32].

Breternitz et al. teaches transforming data in accordance with a schema and
compressing/decompressing the data.

5. Regarding claim 2:

wherein the transformation step further comprises the step of partitioning the data into a
first and second portion which are separately compressed [note element *divided code (30)* figure
2; see col. 4 lines 50-66].

6. Regarding claim 3:

wherein the transformation step further comprises the step of reordering the data into
column major order [note element (140) figure 1].

7. Regarding claim 4:

wherein the transformation step further comprises the step of partitioning the data into
columns which are separately compressed [note elements 930, 40) figure 2; see col. 4 line 50
through col. 6 line 32].

Art Unit: 2177

8. Regarding claim 5:

decompressing the compressed data; and transforming the data in accordance with a schema [*decompressed* (45) figure 2].

9. The limitations of apparatus claims 7-10 parallel method claims 1-4; therefore they are rejected under the same rationale.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2177

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Breternitz Jr. et al US Patent 6,216,213 B1 in view of Houlding et al. *Low entropy image Pyramids for Efficient Lossless Coding*.

Regarding claim 6, Breternitz Jr. et al. teaches “generating a schema for improving compression of a stream of data” through compression of data and partitioning portions of the data through cache line blocks (500); they do not teach separating a sample of data through entropy. **Houlding et al.** teaches compression performance through entropy coding. Houldings Jr. et al. analyzes the effects of low entropy and high entropy [see: abstract; page 1057 (left hand column), page 1151 first paragraph and the last paragraph]. It would have been obvious to one of ordinary skill at the time of the invention to have combined Houlding et al with Breternitz Jr et al because entropy coding would optimize the compression scheme in Breternitz Jr. et al..

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Bolan et al. US Patent 6,092,071

Castelli et al. US Patent 6,014,671

Satoh et al. US Patent 5,448,733

Lekatsas et al. *Code Compression for Embedded Systems*

Art Unit: 2177

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greta Robinson whose telephone number is (703)308-7565. The examiner can normally be reached Monday through Friday from 9:30 AM to 6:00 PM. If any attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene, can be reached at (703) 305-9790.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703)308-6306, (for formal communications; please mark "EXPEDITED PROCEDURE") Or: (703)746-5657, (for informal or draft communications, please label "PROPOSED" or "DRAFT") Hand delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)305-9600.



Greta Robinson

September 28, 2001